SDS & Geodatabase Conversion

Presentation By:

Gary Jeffers

&

Josh Thomas

Where We Started

- Data Collection
- Naming method
- Attributes
- Means of storing data

Where We Went Wrong

- Metadata? Non-Existent
- Confusion
- Time consuming
- Sharing data

Why Metadata?

- What is it?
- When created?
- How created? Procedures
- Who created ?
- Coordinate System
- Attributes?
- etc…

Common Standards:

- Federal Geographic Data Committee (FGDC)
- Spatial Data Standard for Facilities Infrastructures, and Environment (SDSFIE)
- International Organization for

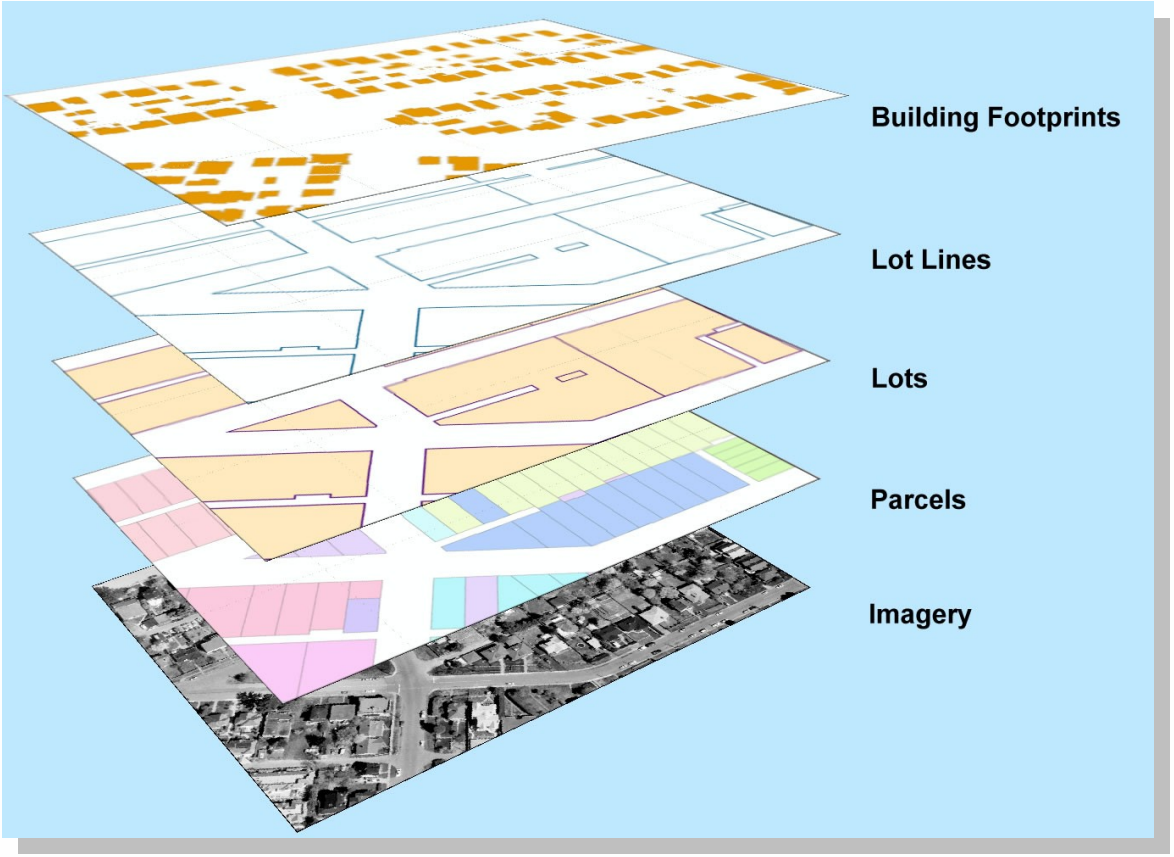
Spatial Data Standard (SDSFIE) for Facilities, Infrastructure, and Environment.

- What is SDSFIE?
- Why a Standard?
- Benefits and Importance

Traditional Data vs. Geodatabase

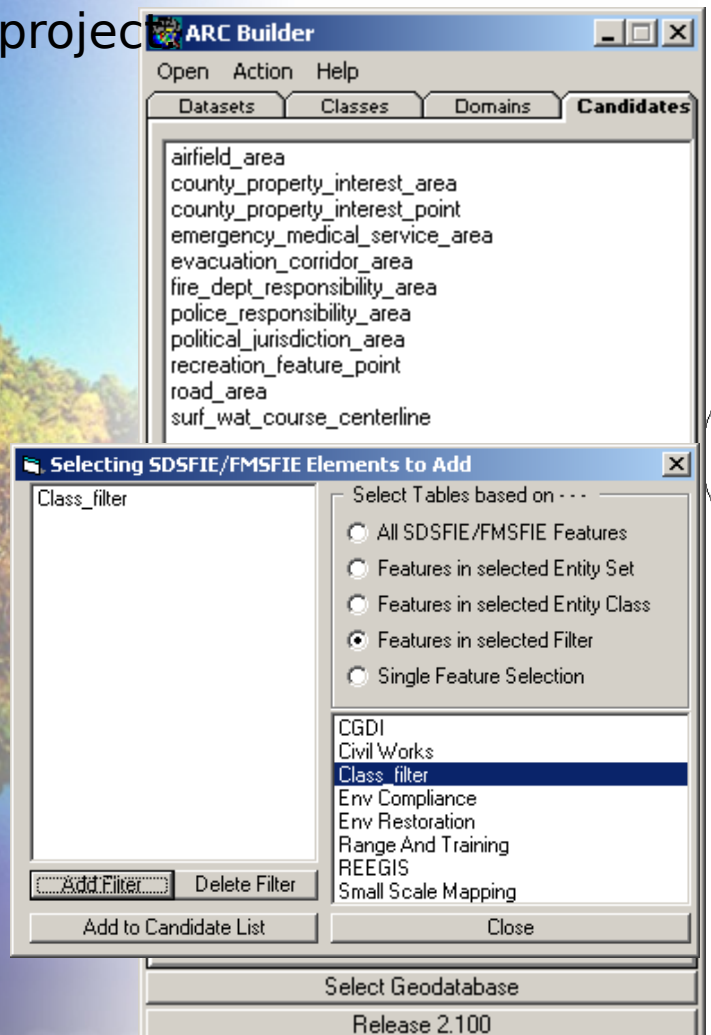
- What Is a Geodatabase
- Advantages of Traditional
- Disadvantages of Traditional
- Advantages of Geodatabase
- Disadvantages of Geodatabase

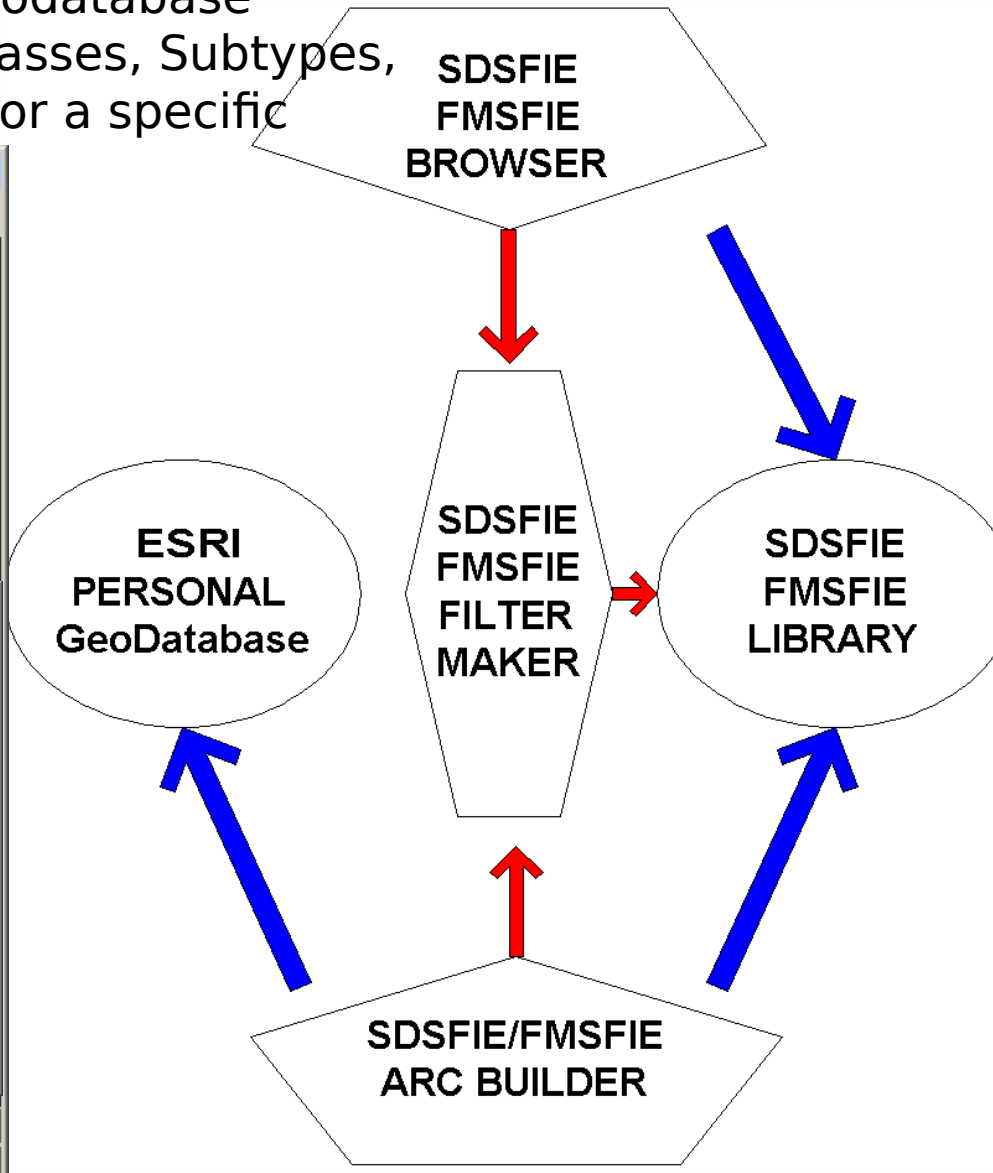
Sample Geodatabase



SDSFIE / FMSFIE:

The creation of a filter using the SDS Filter Maker serves the purpose of choosing the required components of a Geodatabase (Feature datasets, Feature Classes, Subtypes, relationships, and domains) for a specific projec





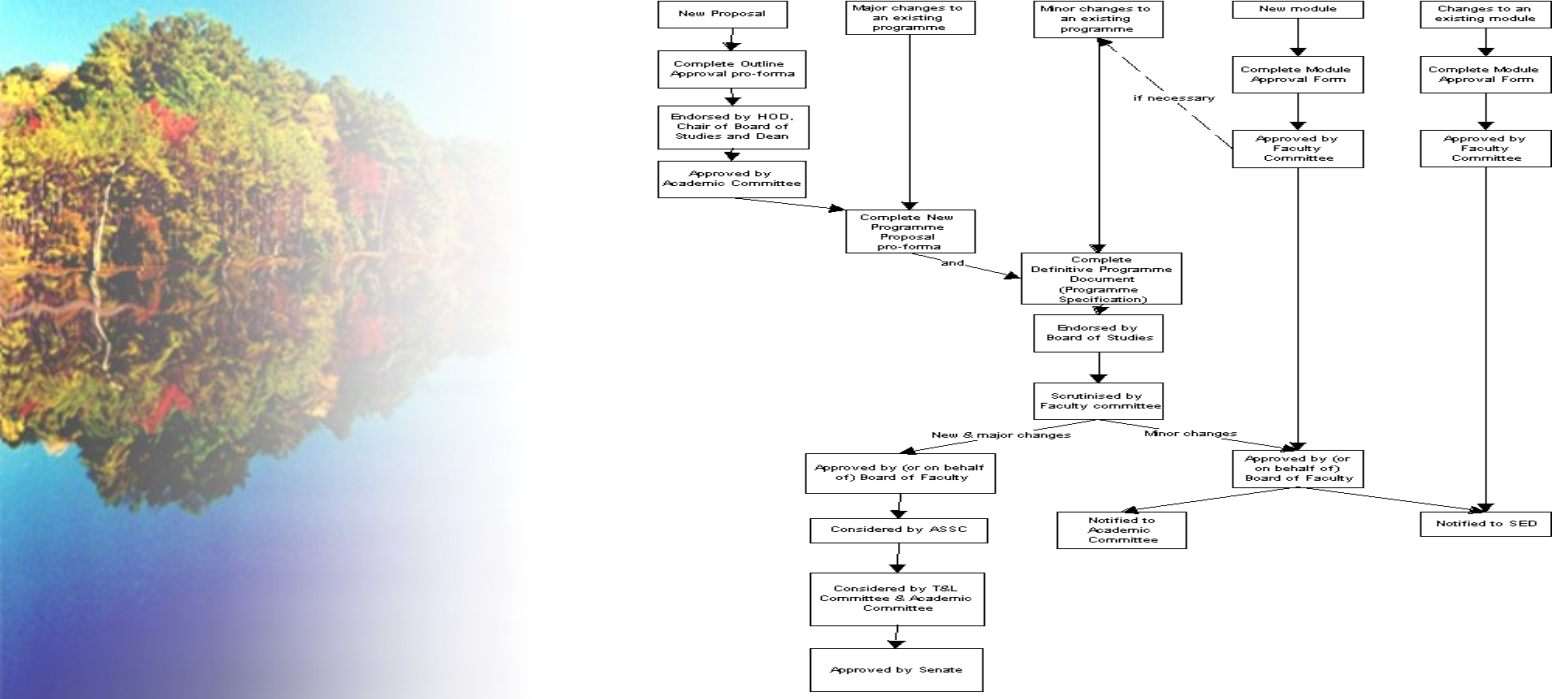
Procedures:

(From Merriam Webster Dictionary)

1 a : a particular way of accomplishing something or of acting b : a step in a procedure

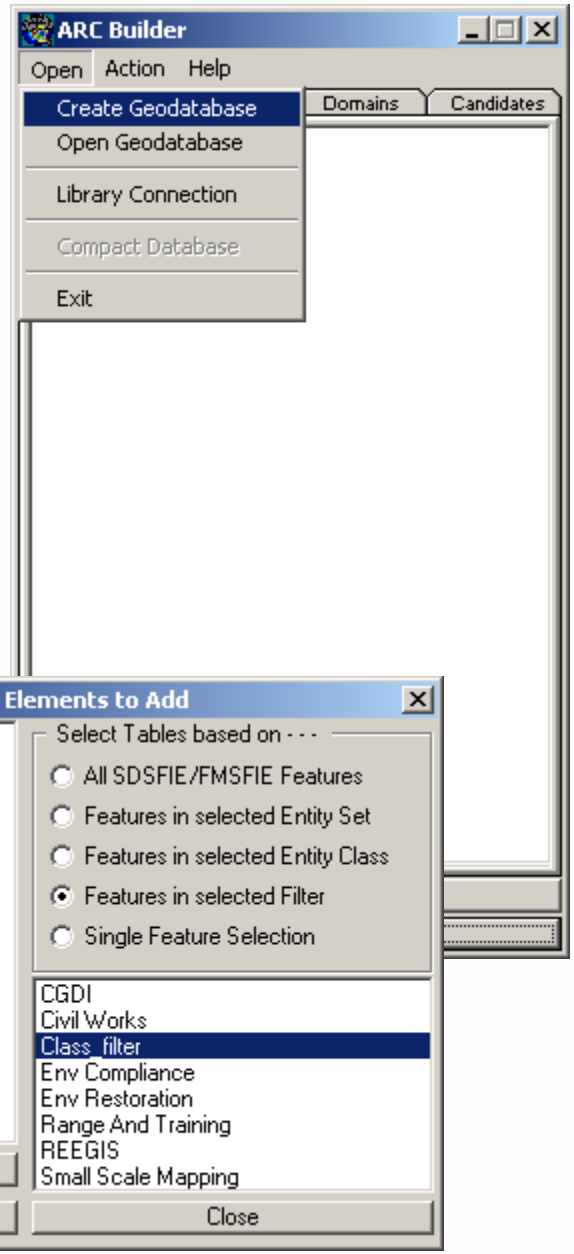
2 a : a series of steps followed in a regular definite order <legal procedure> <a surgical procedure> b : a series of instructions for a computer that has a name by which it can be called into action

3 a : a traditional or established way of doing things

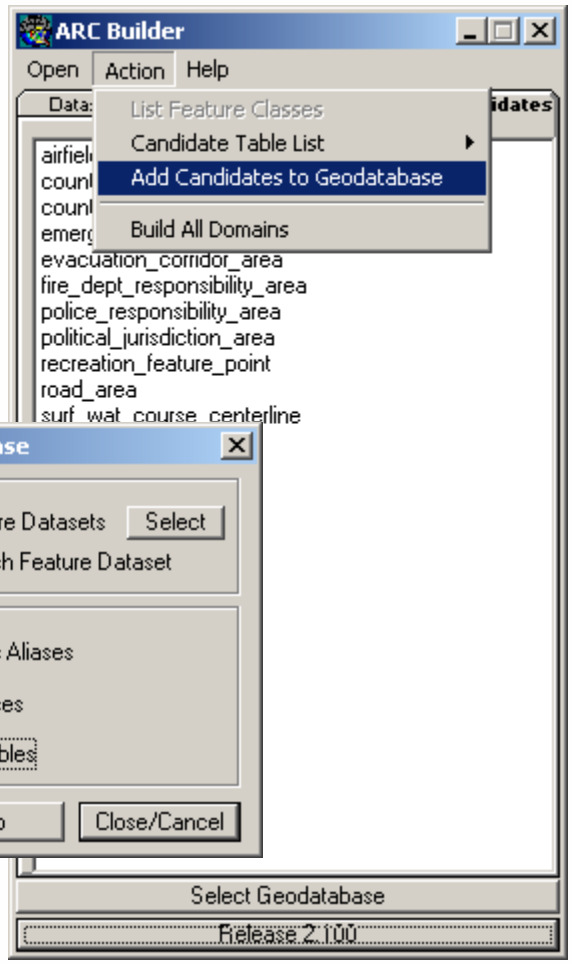

New Proposal
Complete Outline Approval pro-forma
Endorsed by HOD, Chair of Board of Studies and Dean
Approved by Academic Committee
Major changes to an existing programme
Complete New Programme Proposal pro-forma
and
Minor changes to an existing programme
if necessary
Complete Definitive Programme Document (Programme Specification)
Endorsed by Board of Studies
Scrutinised by Faculty committee
New & major changes
Minor changes
Approved by (or on behalf of) Board of Faculty
Considered by ASSC
Considered by T&L Committee & Academic Committee
Approved by Senate
New module
Complete Module Approval Form
Approved by Faculty Committee
Changes to an existing module
Complete Module Approval Form
Approved by Faculty Committee
Approved by (or on behalf of) Board of Faculty
Notified to Academic Committee
Notified to SED

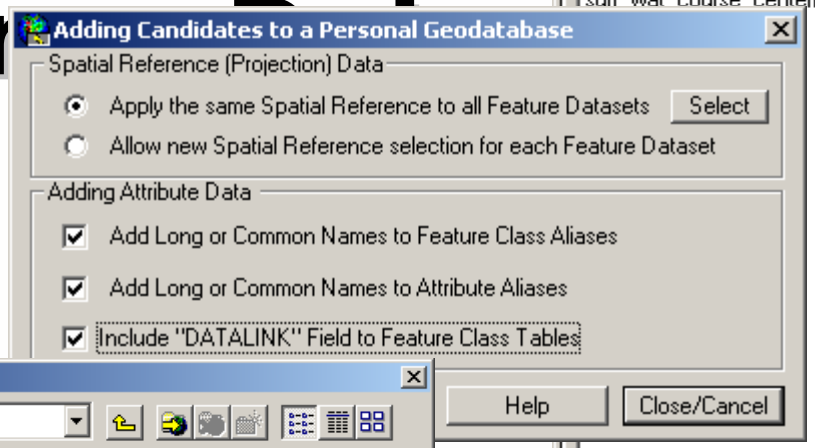
SDSFIE / FMSFIE:

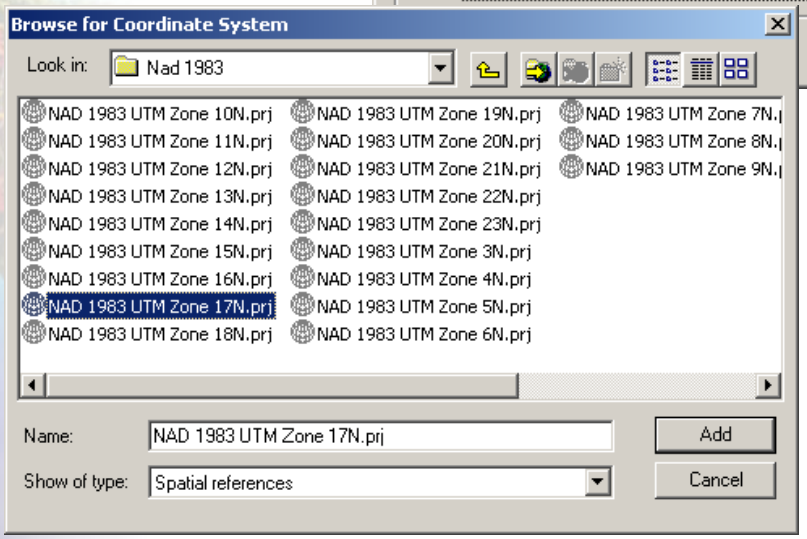
The creation of a filter using the SDS Filter Maker serves the purpose of choosing the required components of a Geodatabase (Feature datasets, Feature Classes, Subtypes, relationships, and domains) for a specific project.



Setting The Spatial Referen

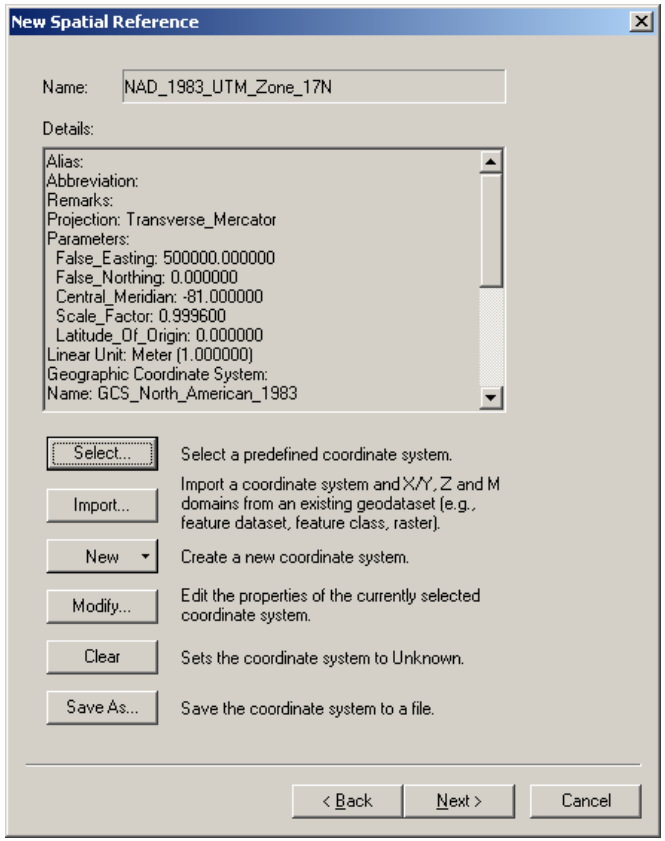


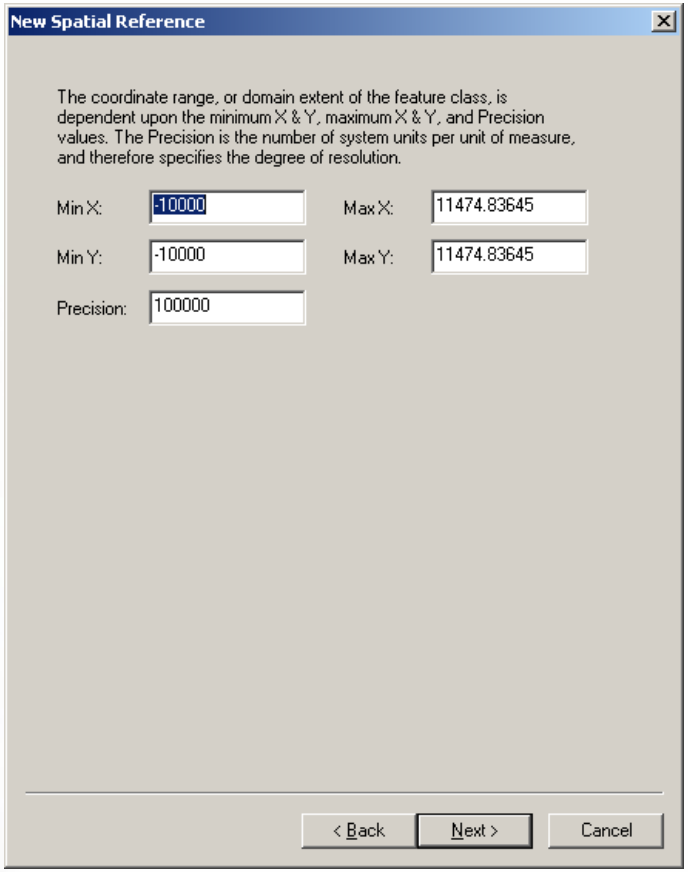

Adding Candidates to a Personal Geodatabase
Spatial Reference (Projection) Data
Apply the same Spatial Reference to all Feature Datasets
Select
Allow new Spatial Reference selection for each Feature Dataset
Adding Attribute Data
Add Long or Common Names to Feature Class Aliases
Add Long or Common Names to Attribute Aliases
Include "DATALINK" Field to Feature Class Tables
Help
Close/Cancel


Browse for Coordinate System
Look in:
Nad 1983
NAD 1983 UTM Zone 10N.prj
NAD 1983 UTM Zone 11N.prj
NAD 1983 UTM Zone 12N.prj
NAD 1983 UTM Zone 13N.prj
NAD 1983 UTM Zone 14N.prj
NAD 1983 UTM Zone 15N.prj
NAD 1983 UTM Zone 16N.prj
NAD 1983 UTM Zone 17N.prj
NAD 1983 UTM Zone 18N.prj
NAD 1983 UTM Zone 19N.prj
NAD 1983 UTM Zone 20N.prj
NAD 1983 UTM Zone 21N.prj
NAD 1983 UTM Zone 22N.prj
NAD 1983 UTM Zone 23N.prj
NAD 1983 UTM Zone 3N.prj
NAD 1983 UTM Zone 4N.prj
NAD 1983 UTM Zone 5N.prj
NAD 1983 UTM Zone 6N.prj
NAD 1983 UTM Zone 7N.
NAD 1983 UTM Zone 8N.
NAD 1983 UTM Zone 9N.
Name:
NAD 1983 UTM Zone 17N.prj
Add
Show of type:
Spatial references
Cancel

Geodatabase Grid:

The Geodatabase stores coordinates as a positive 4 byte integers that have a maximum value of 2,147,483,648 (~2.14E^9).



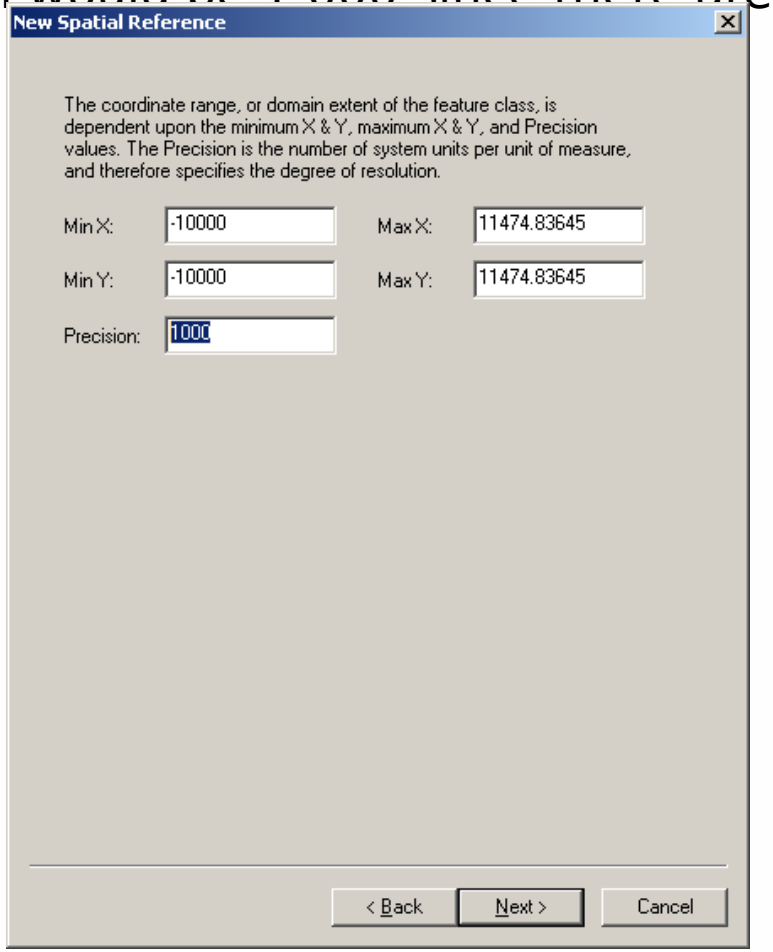

New Spatial Reference
The coordinate range, or domain extent of the feature class, is dependent upon the minimum X & Y, maximum X & Y, and Precision values. The Precision is the number of system units per unit of measure, and therefore specifies the degree of resolution.
Min X:
-10000
Max X:
11474.83645
Min Y:
-10000
Max Y:
11474.83645
Precision:
100000
< Back
Next >
Cancel

Precision:

Precision is the number of storage units in one map unit. The dataset precision is determined by dividing map units by storage units.

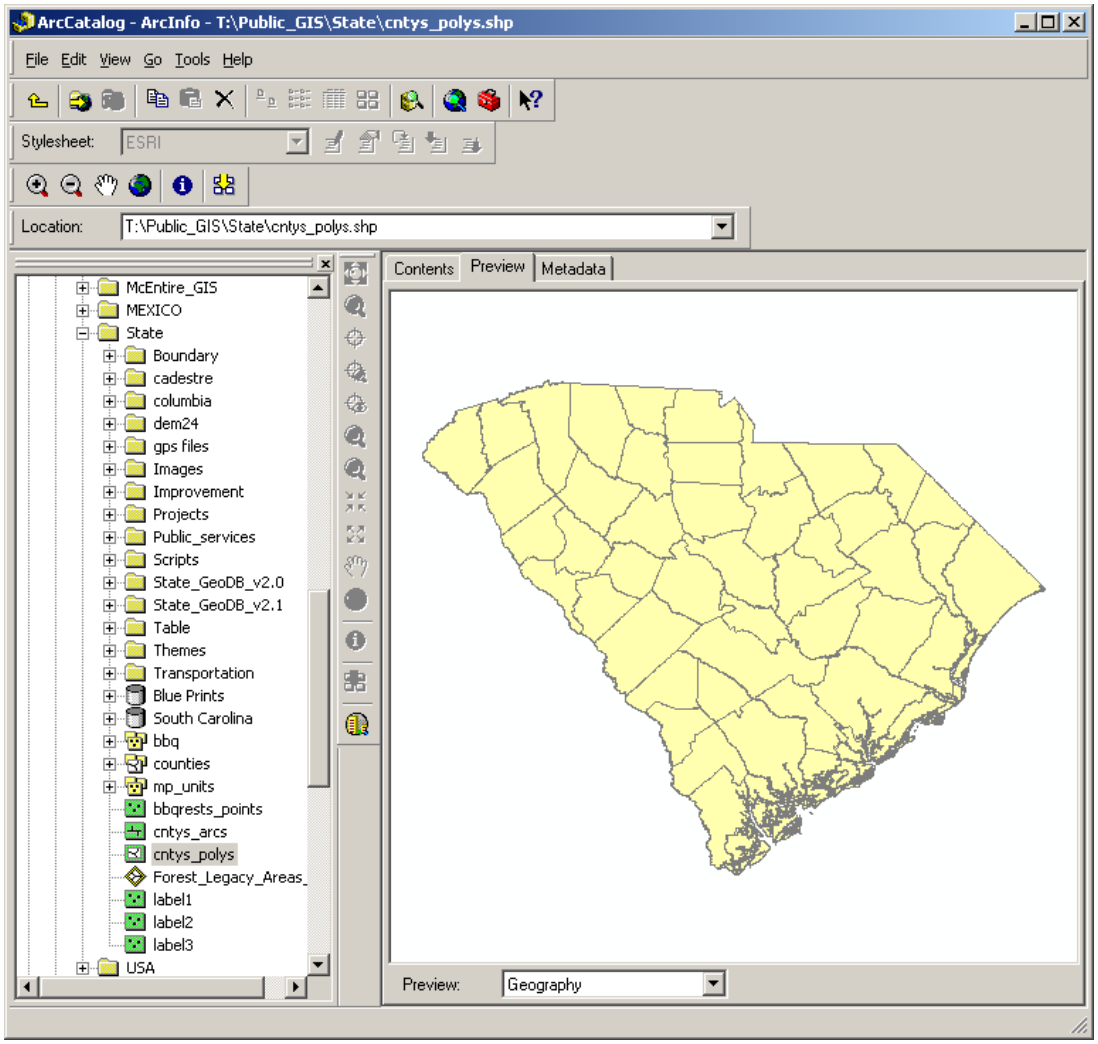
Example: <<Your map units are in meters and the desired storage units are centimeters, your precision would be 1,000 since there are 1,000 centimeters to 1 meter.>>

ArcGIS DOES NOT allow the user to change spatial domain values in a dataset; Precision should account for the future accuracy levels at witch data may be collected.


New Spatial Reference
The coordinate range, or domain extent of the feature class, is dependent upon the minimum X & Y, maximum X & Y, and Precision values. The Precision is the number of system units per unit of measure, and therefore specifies the degree of resolution.
Min X:
-10000
Max X:
11474.83645
Min Y:
-10000
Max Y:
11474.83645
Precision:
1000
< Back
Next >
Cancel

Setting Spatial Domains and Determining Precision:

The first part in defining the Spatial Domains of your Geo-Database is to locate your largest coverage.



Centering the Data:

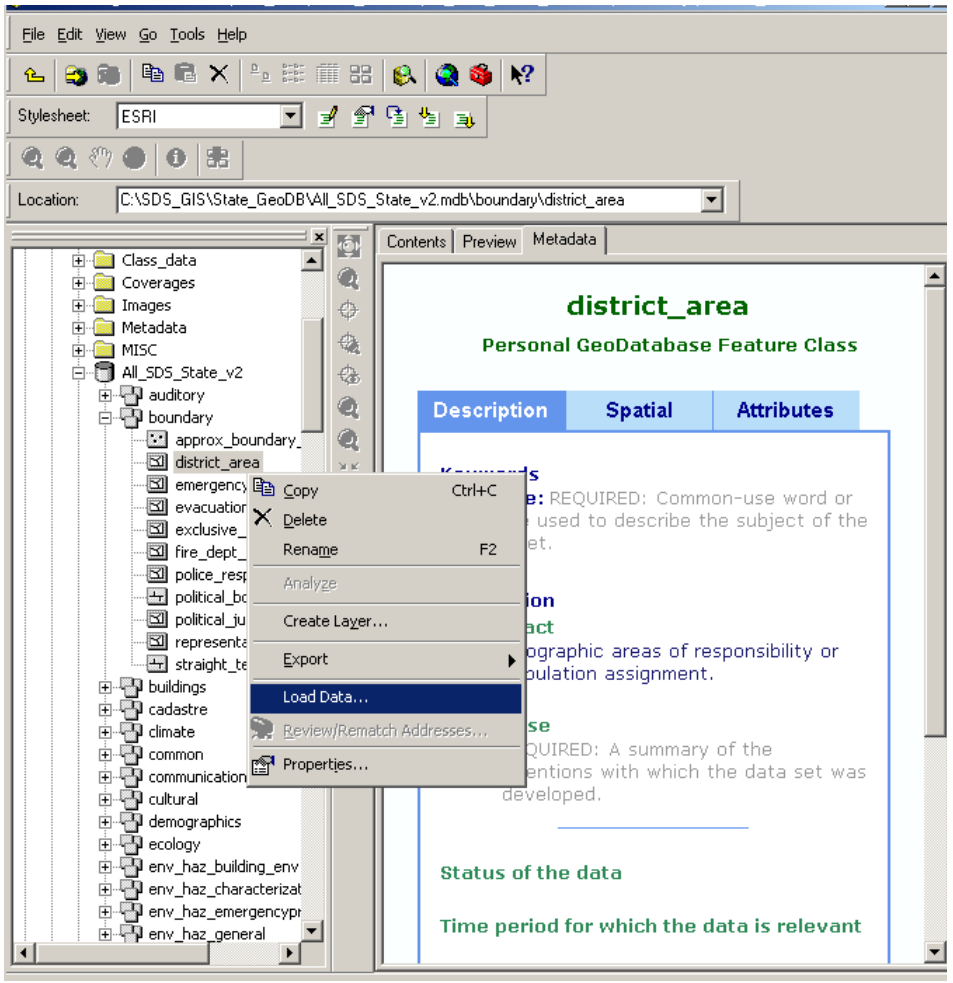
After entering the Min (X,Y) and Precision values the system automatically calculates the max values to complete the entire 2.14 x 2.14 billion grid.

You will want to center the data in the grid so that it can expand equally in all directions. In order to do this there are six key variables that need to be determined first. They are as follows:

Delta X
Delta Y
New Min X
New Min Y
New Max X
New Max Y

You are now ready to….

Load Data…..



Questions?